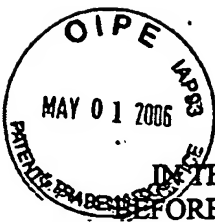


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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Fee only

In re application of

FINGHAI HAO ET AL.

Serial No. 10/670,434 (TI-35470)

Filed September 23, 2003

For: REDUCTION OF CHANNEL HOT CARRIER EFFECTS IN TRANSISTOR DEVICES

Art Unit 2823

Examiner Khiem D. Nguyen

Customer No. 23494

Mail Stop Appeal Brief-Patents
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4-28-06

Jay M. Cantor, Reg. No. 19,906

Sir:

BRIEF ON APPEAL

REAL PARTY IN INTEREST

The real party in interest is Texas Instruments Incorporated, a Delaware corporation with offices at 7839 Churchill Way, Dallas, Texas 75251.

RELATED APPEALS AND INTERFERENCES

There is an appeal in divisional application Serial No. 11/135,544.

TI-35470.1-1

STATUS OF CLAIMS

This is an appeal of claims 1 to 22, all of the rejected claims. The invention of cancelled claims 22 to 27 is the subject of a divisional application referenced above. Please charge any costs to Deposit Account No. 20-0668.

STATUS OF AMENDMENTS

An amendment was not filed after a second final rejection.

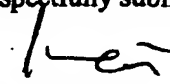
SUMMARY OF CLAIMED SUBJECT MATTER

According to claims 1 to 12 the claimed invention relates to a method for fabricating a transistor structure which includes the steps of providing a substrate having a surface and a channel region (26, 100) and forming a lightly doped drain (LDD) region (108, 20) in the substrate contiguous to the channel region (portion of substrate beneath the gate) and the surface. A first dopant (114) having a lower dopant concentration than that of the LDD region is implanted into the lightly doped drain (LDD) region to a depth less than the LDD junction depth (112) and a second dopant (122) is implanted into the substrate *beyond* the LDD junction depth to form a source/drain region (120), the implantation of the second dopant of sufficient dopant concentration to overpower a portion of the LDD remote from the channel and a substantial portion of the first dopant to define a floating region of the first dopant completely within the LDD region (124), the source/drain region and the surface and remote from the channel region with reduced dopant concentration relative to the dopant concentration of the LDD region (page 5, line 15ff). The floating region can further comprise a floating ring substantially self-aligned with an edge of a gate (106) of the transistor structure (page 9, line 30ff). The LDD region can be formed by implanting a dose of an LDD dopant that is greater than a dose of the first dopant.

CONCLUSIONS

For the reasons stated above, reversal of the final rejection and allowance of the claims on appeal is requested that justice be done in the premises.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jay M. Cantor", is written over the typed name.

Jay M. Cantor
Reg. No. 19906
(301) 424-0355
(972) 917-5293